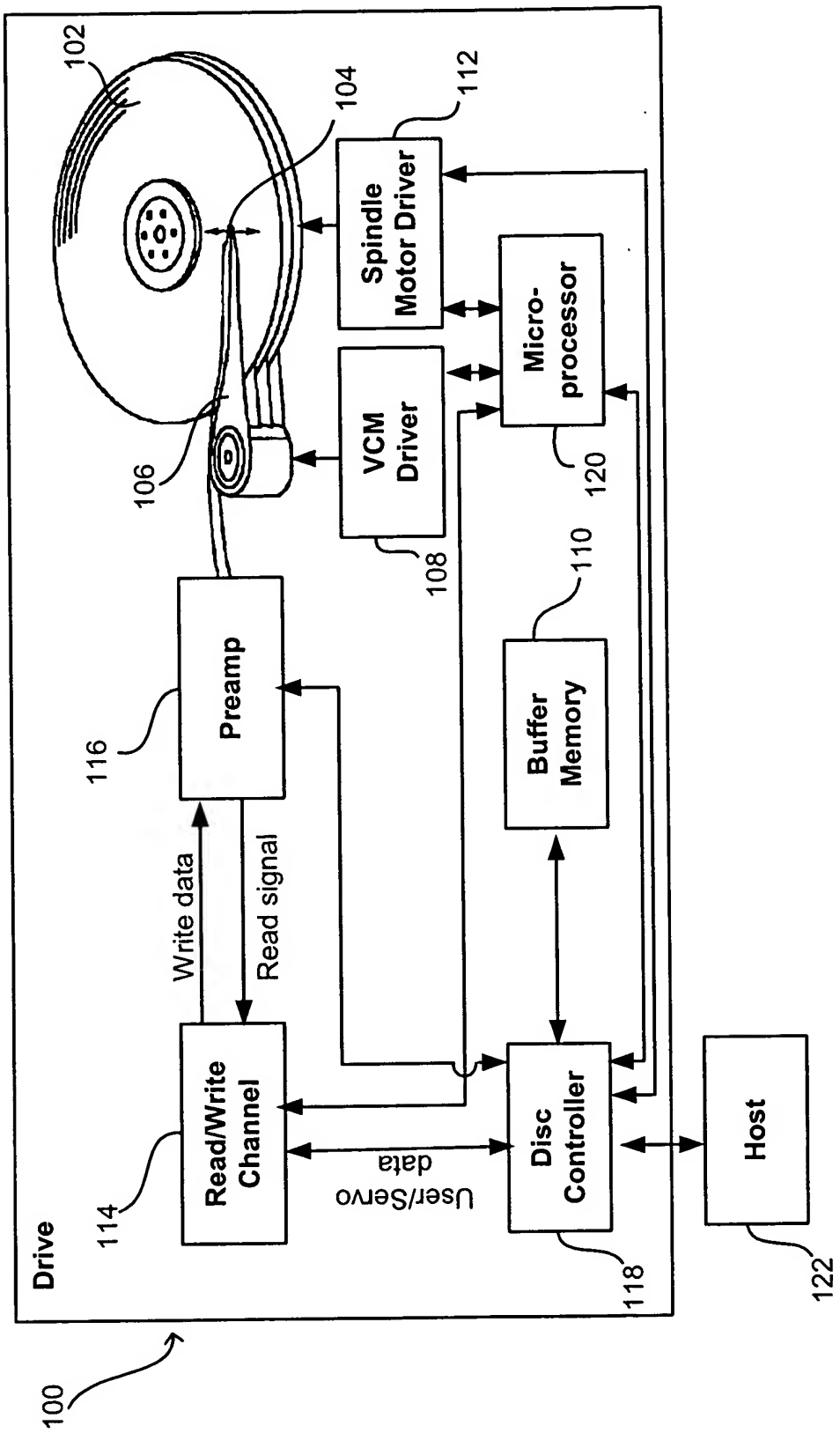

100
Drive
102
104
106
112
Spindle Motor Driver
VCM Driver
Micro-processor
120
108
110
Buffer Memory
116
Preamp
Write data
Read signal
114
Read/Write Channel
User/Servo data
Disc Controller
118
Host
122

Figure 1

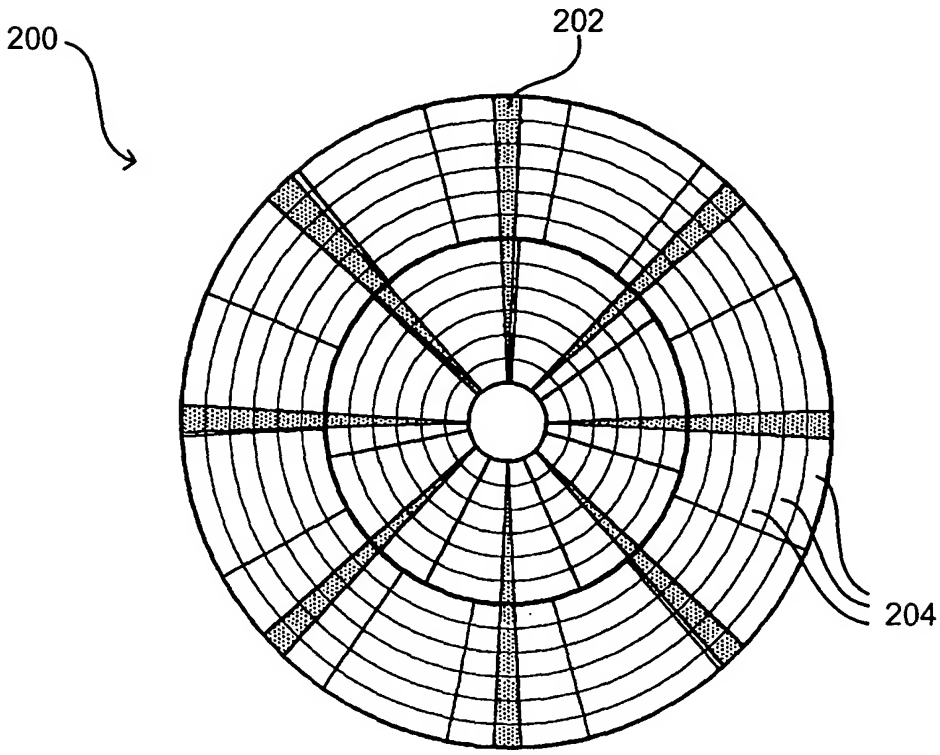


Figure 2

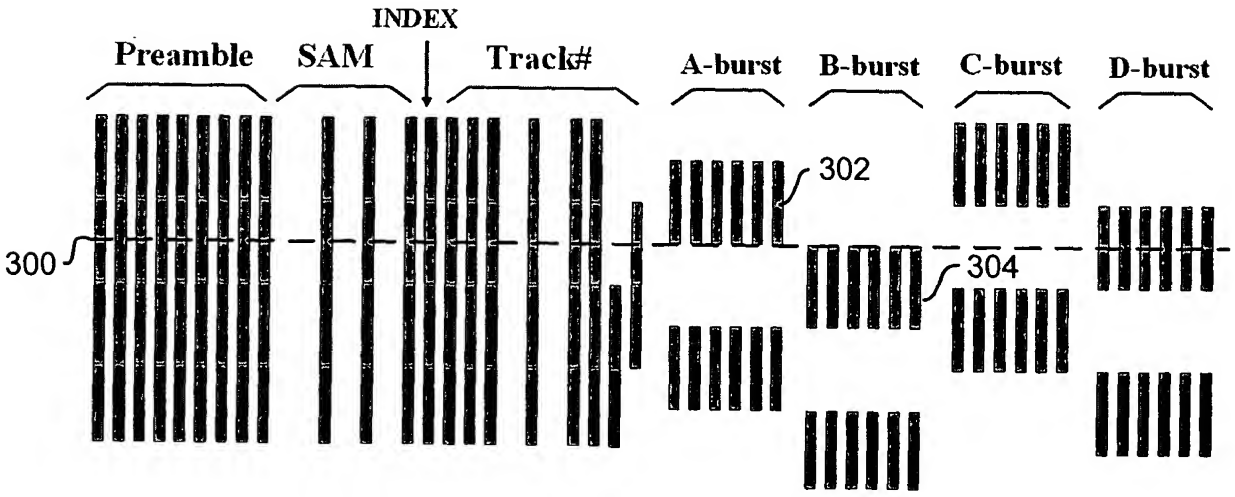
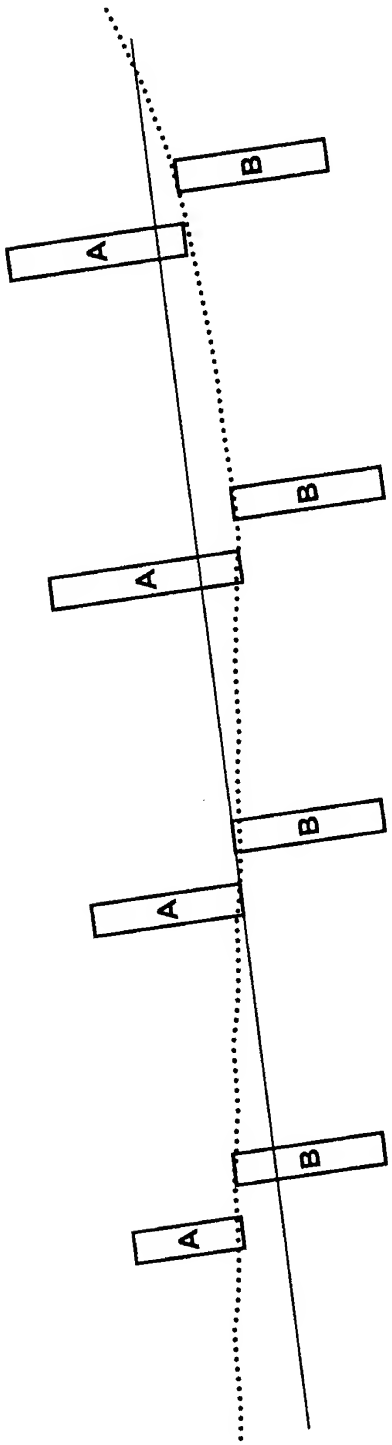


Figure 3



- Prior Art -

Figure 4

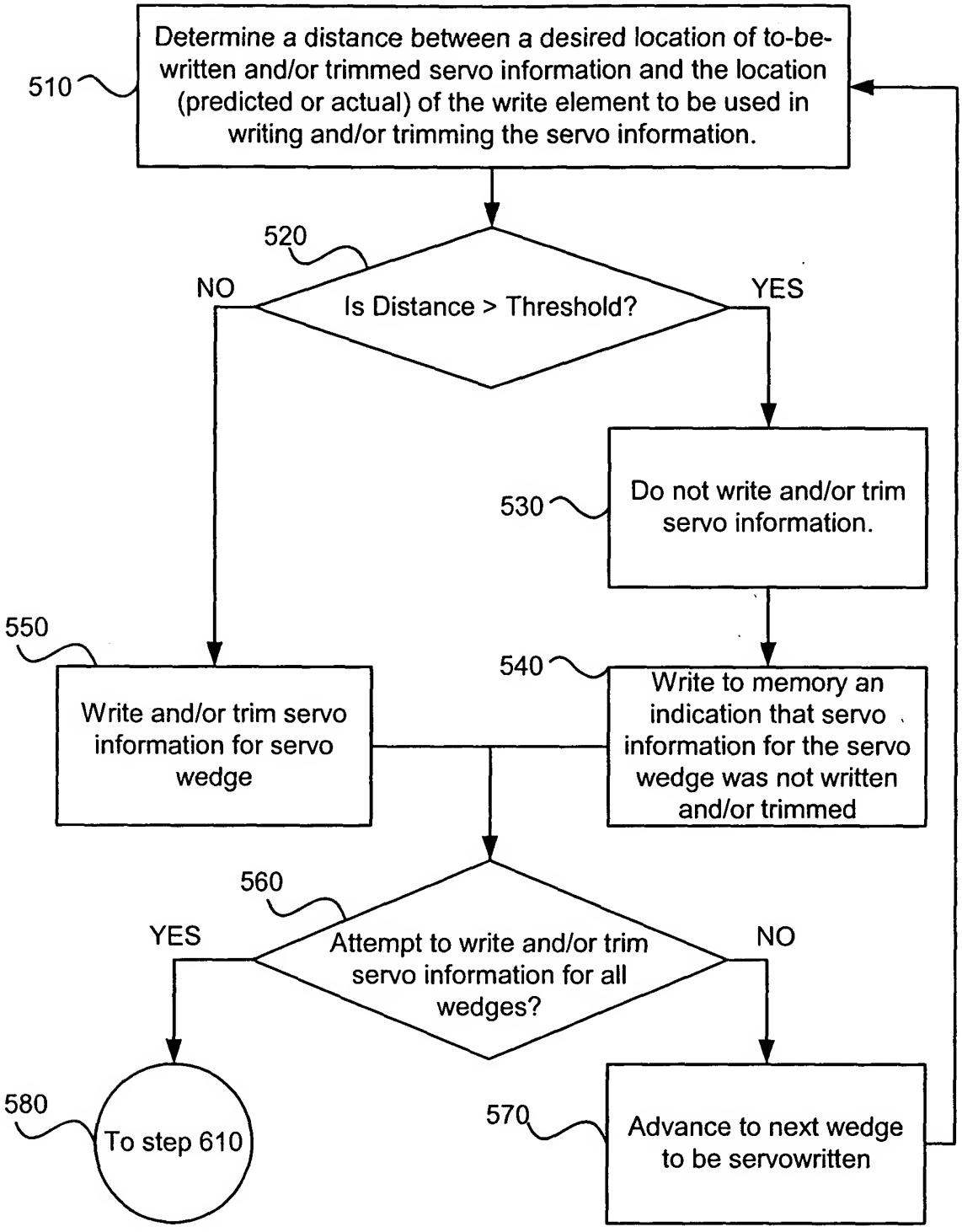

Determine a distance between a desired location of to-be-written and/or trimmed servo information and the location (predicted or actual) of the write element to be used in writing and/or trimming the servo information.
510
520
Is Distance > Threshold?
NO
YES
Do not write and/or trim servo information.
530
550
Write and/or trim servo information for servo wedge
540
Write to memory an indication that servo information for the servo wedge was not written and/or trimmed
560
Attempt to write and/or trim servo information for all wedges?
YES
NO
580
To step 610
570
Advance to next wedge to be servowritten

Figure 5

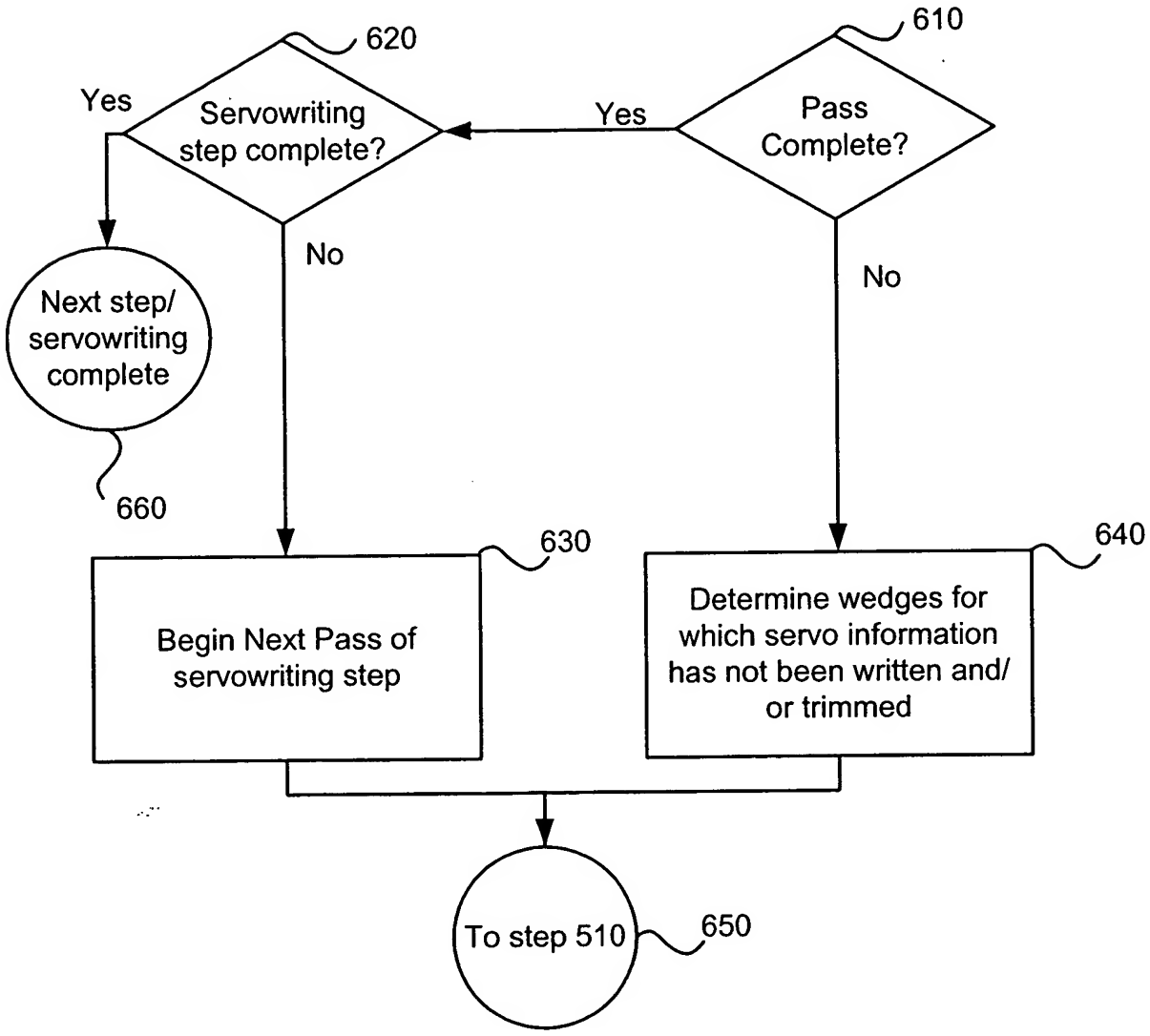

610
Pass Complete?
Yes
620
Servowriting step complete?
Yes
No
No
Next step/ servowriting complete
660
630
Begin Next Pass of servowriting step
640
Determine wedges for which servo information has not been written and/ or trimmed
To step 510
650

Figure 6

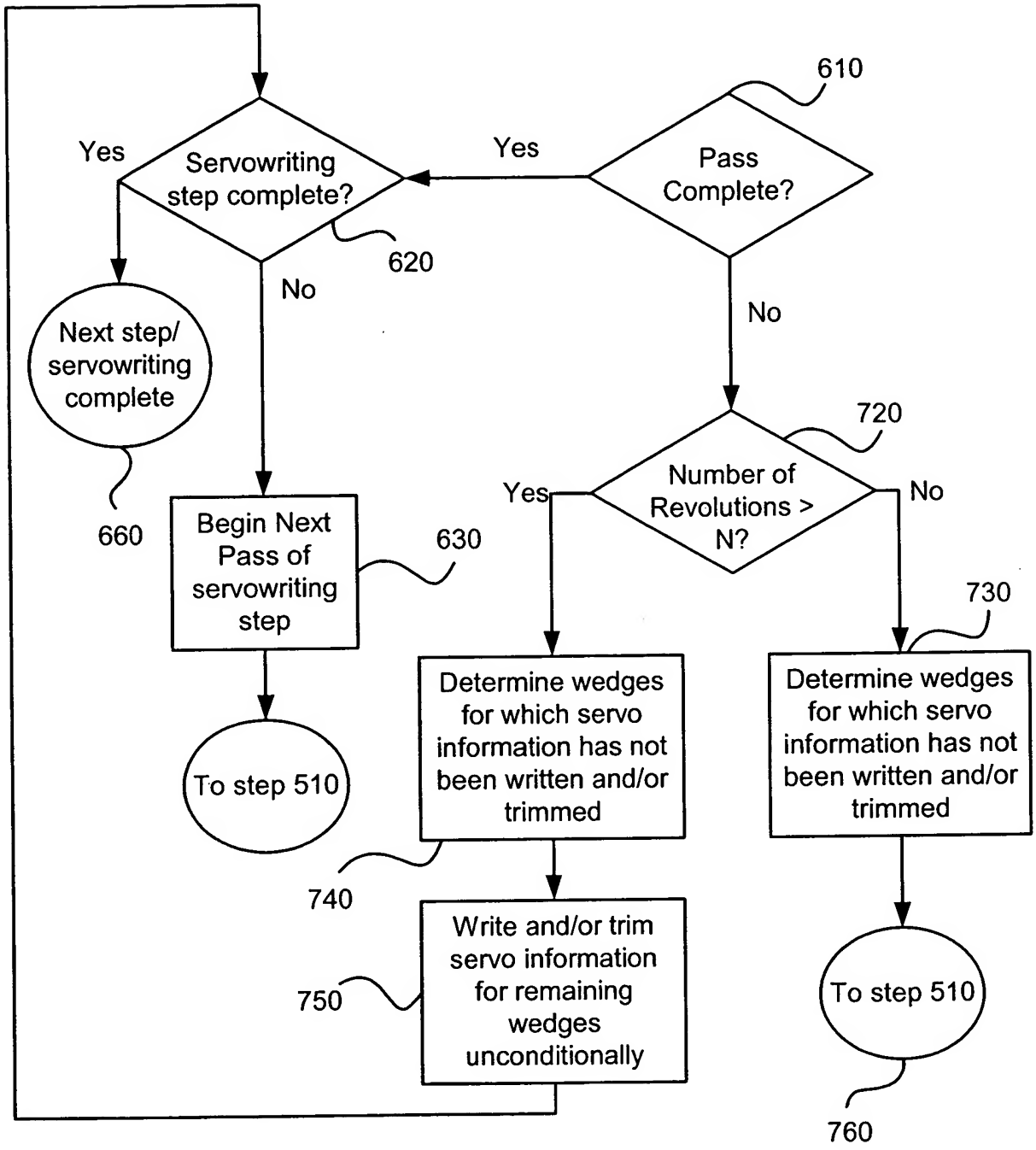

610
Pass Complete?
Yes
Servowriting step complete?
620
Yes
No
No
Next step/ servowriting complete
660
720
Number of Revolutions > N?
Yes
No
Begin Next Pass of servowriting step
630
730
Determine wedges for which servo information has not been written and/or trimmed
Determine wedges for which servo information has not been written and/or trimmed
To step 510
740
Write and/or trim servo information for remaining wedges unconditionally
750
To step 510
760

Figure 7

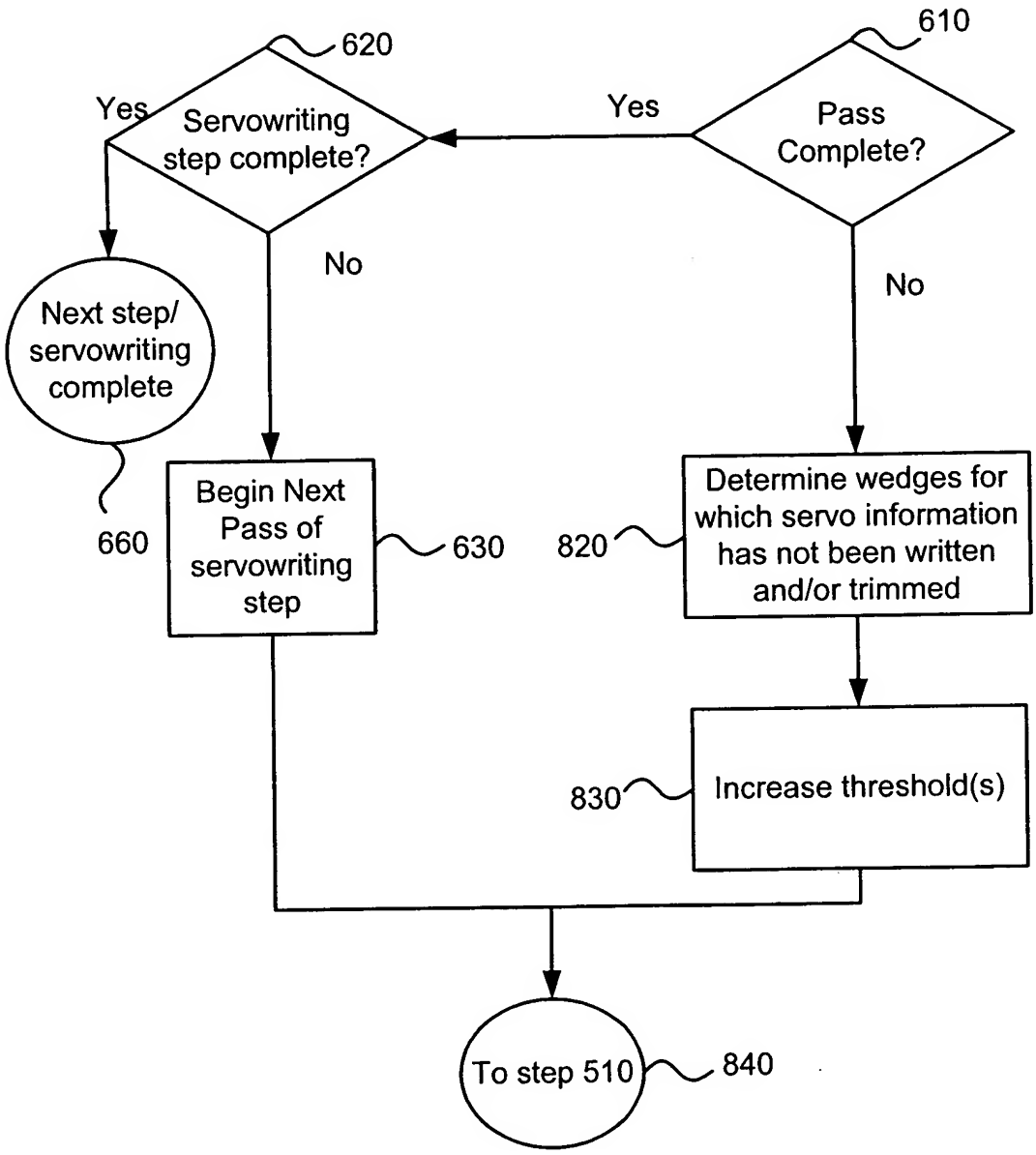

610
Pass Complete?
Yes
620
Servowriting step complete?
Yes
No
No
Next step/ servowriting complete
660
Begin Next Pass of servowriting step
630
820
Determine wedges for which servo information has not been written and/or trimmed
830
Increase threshold(s)
To step 510
840

Figure 8

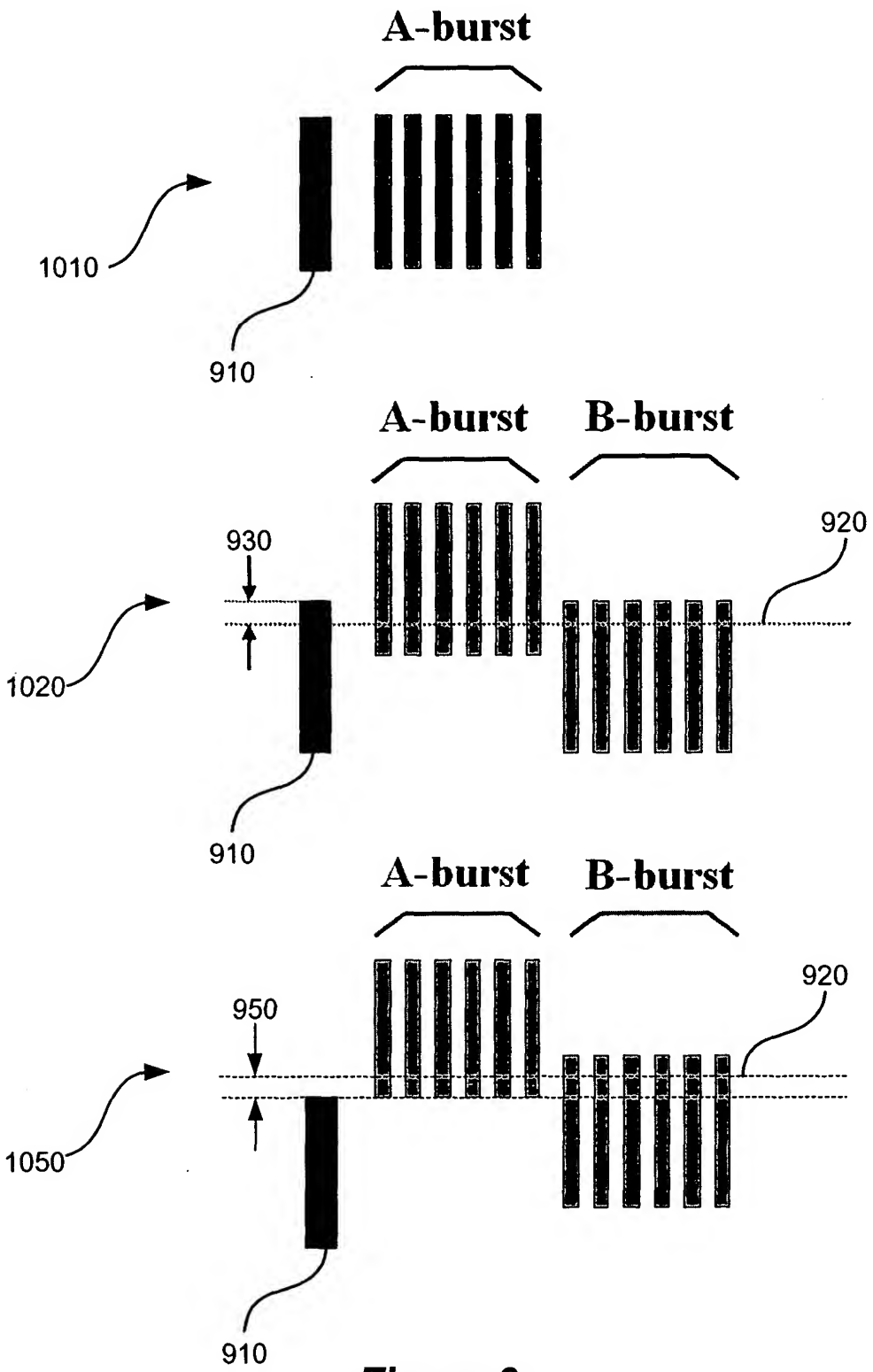

A-burst
1010
910
A-burst
B-burst
930
920
1020
910
A-burst
B-burst
950
920
1050
910

Figure 9

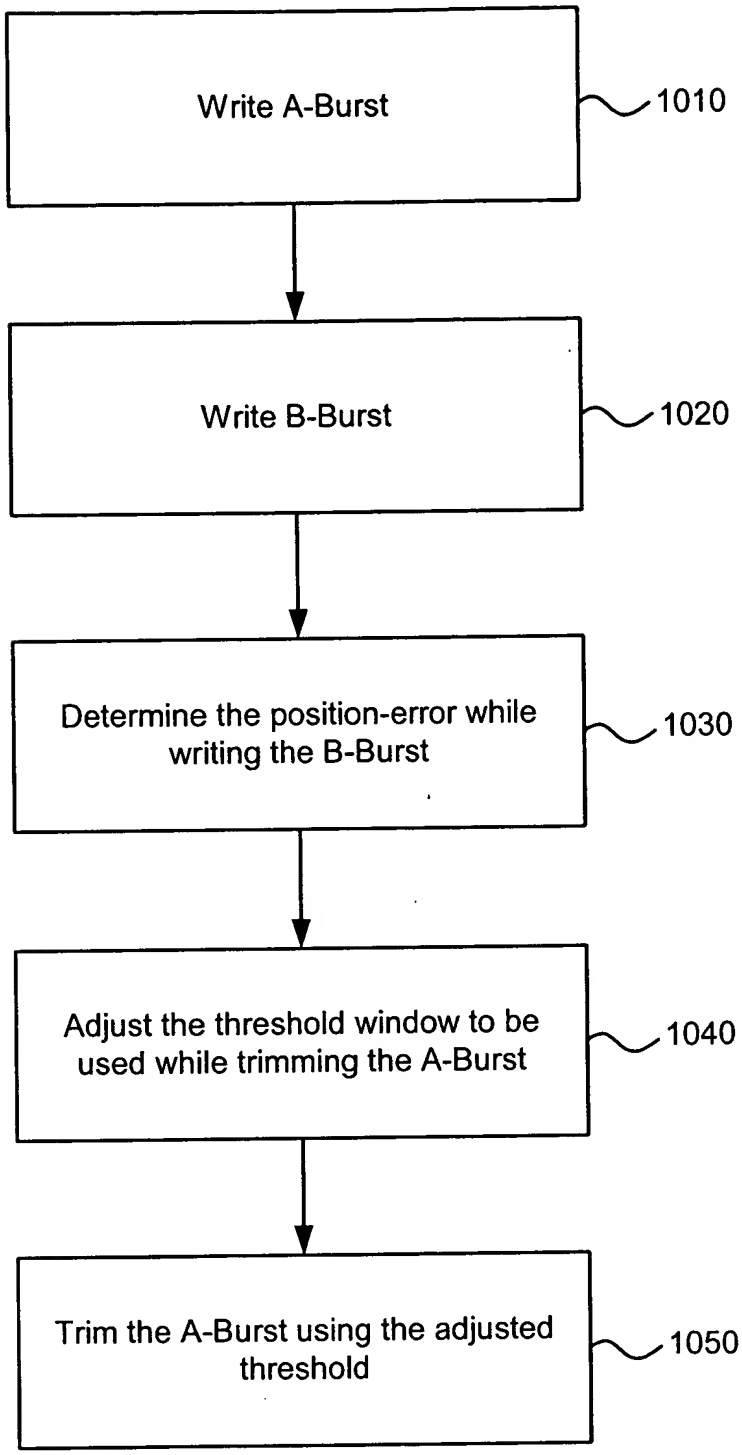

Write A-Burst
1010
Write B-Burst
1020
Determine the position-error while writing the B-Burst
1030
Adjust the threshold window to be used while trimming the A-Burst
1040
Trim the A-Burst using the adjusted threshold
1050

Figure 10

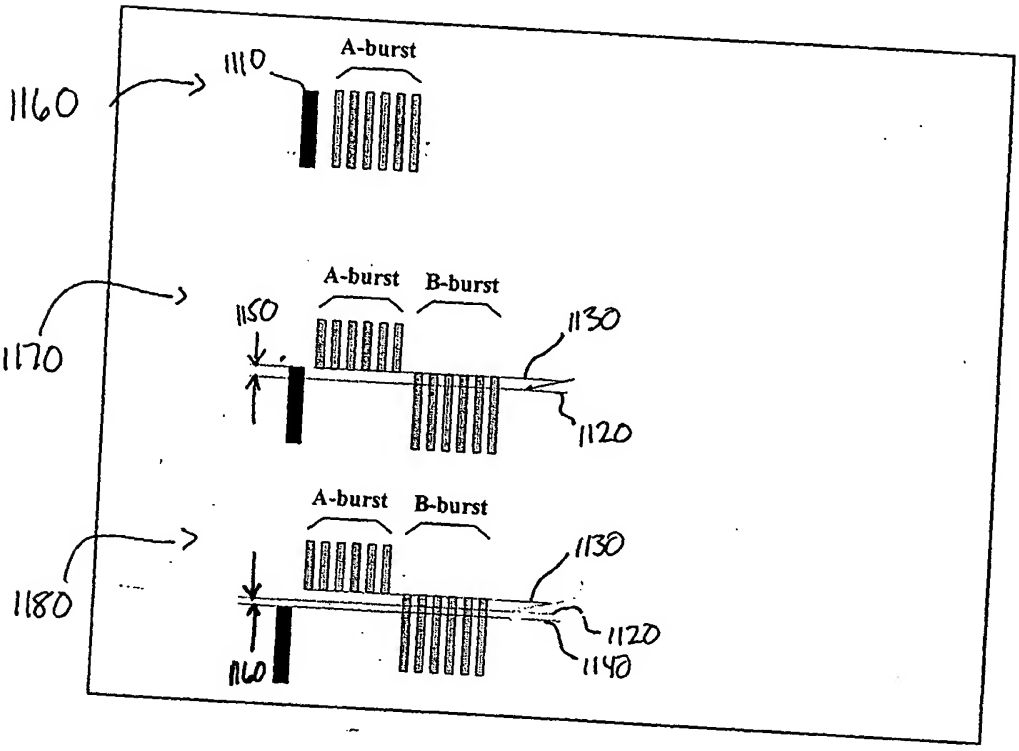


Figure 11

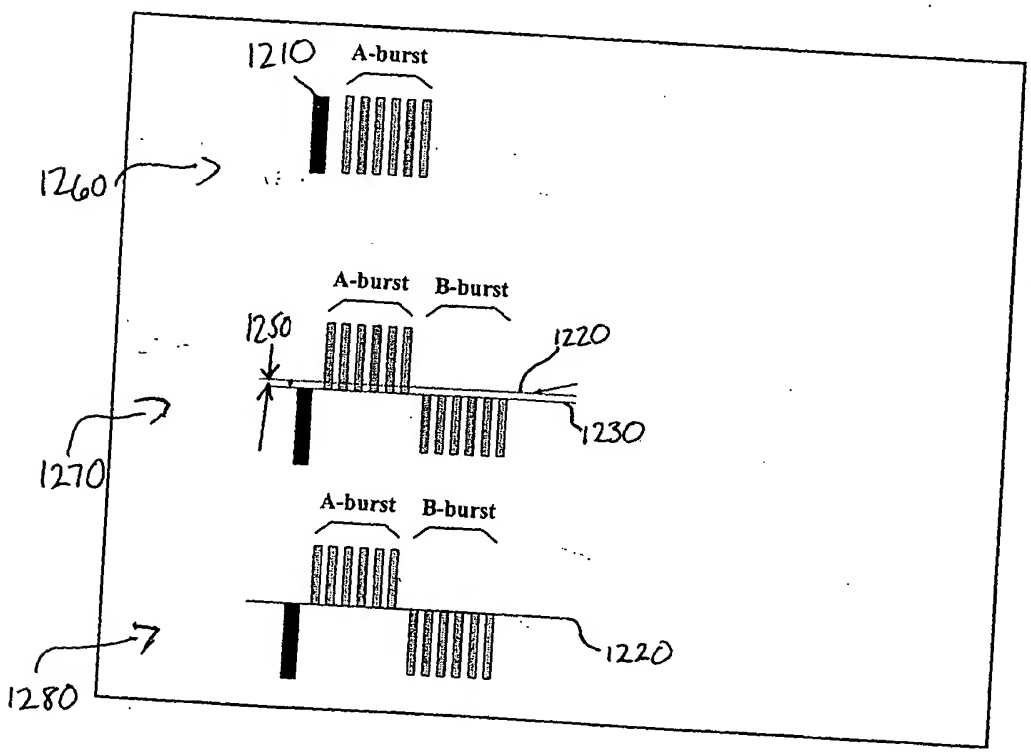


Figure 12

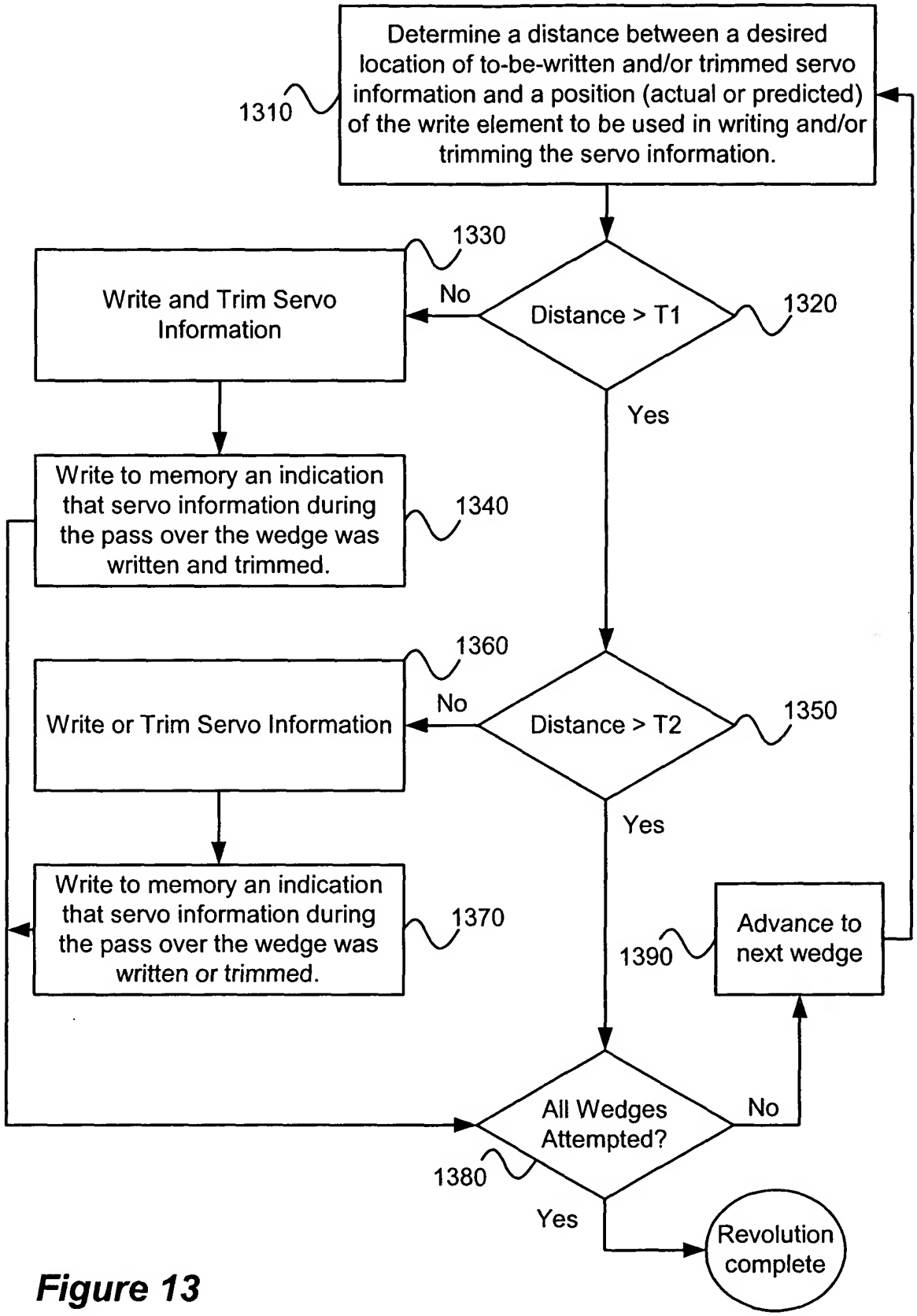

Determine a distance between a desired location of to-be-written and/or trimmed servo information and a position (actual or predicted) of the write element to be used in writing and/or trimming the servo information.
1310
Distance > T1
1320
No
Write and Trim Servo Information
1330
Yes
Write to memory an indication that servo information during the pass over the wedge was written and trimmed.
1340
Distance > T2
1350
No
Write or Trim Servo Information
1360
Yes
Write to memory an indication that servo information during the pass over the wedge was written or trimmed.
1370
Advance to next wedge
1390
All Wedges Attempted?
1380
No
Yes
Revolution complete

Figure 13

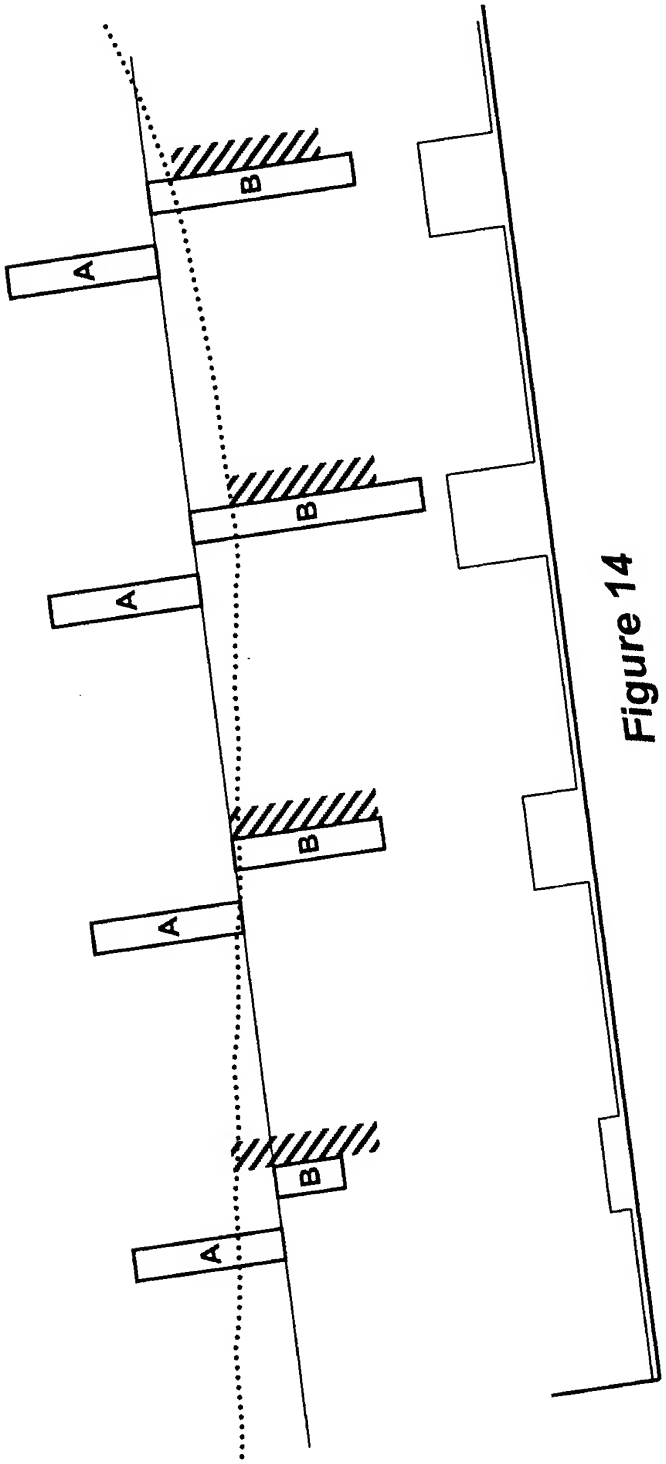


Figure 14

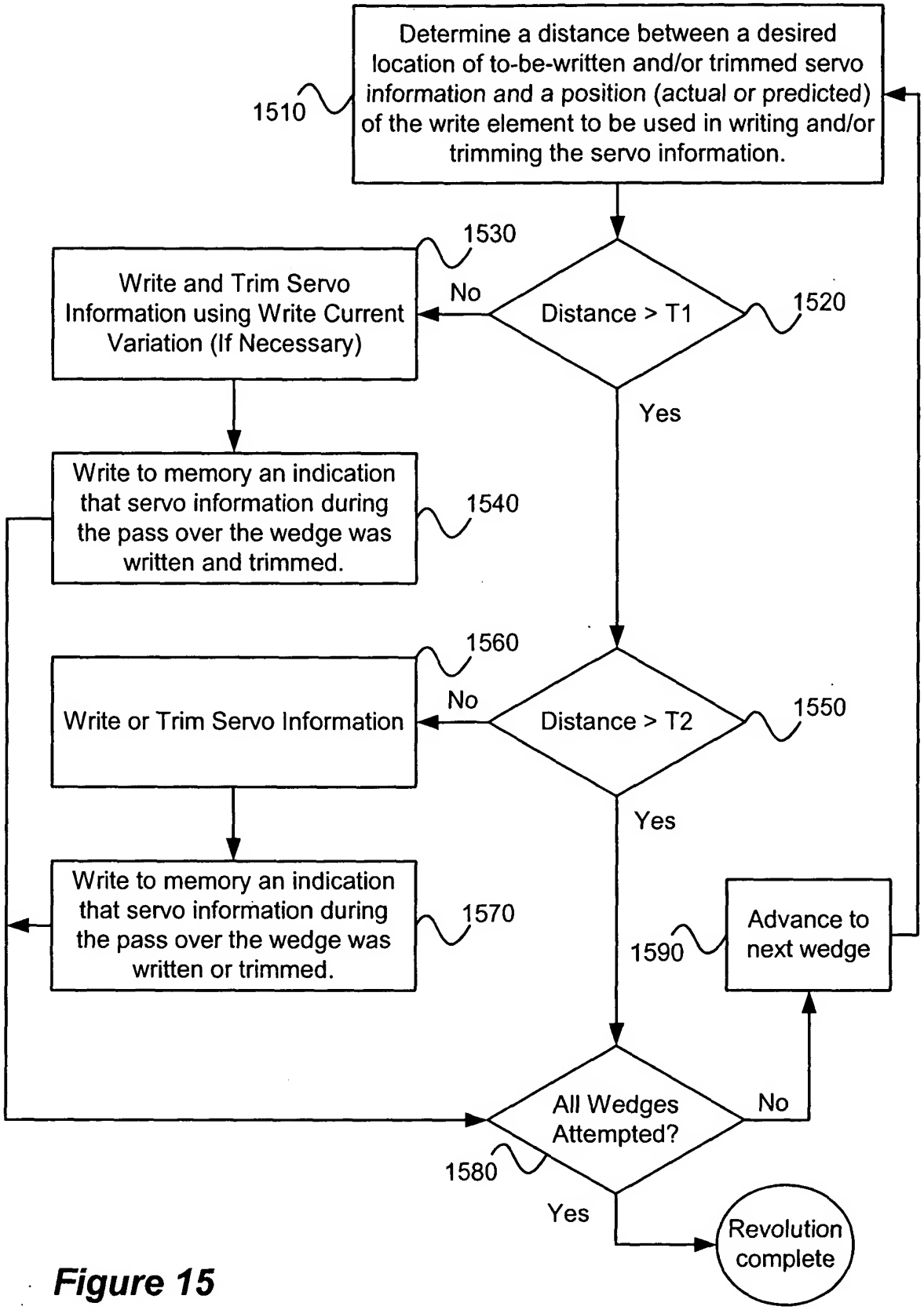

Determine a distance between a desired location of to-be-written and/or trimmed servo information and a position (actual or predicted) of the write element to be used in writing and/or trimming the servo information.
1510
Distance > T1
1520
No
Yes
1530
Write and Trim Servo Information using Write Current Variation (If Necessary)
Write to memory an indication that servo information during the pass over the wedge was written and trimmed.
1540
Distance > T2
1550
No
Yes
1560
Write or Trim Servo Information
Write to memory an indication that servo information during the pass over the wedge was written or trimmed.
1570
Advance to next wedge
1590
All Wedges Attempted?
1580
No
Yes
Revolution complete

Figure 15